



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,891	12/02/2003	Chung-Ju Wu	82547	2424

20529 7590 08/03/2006

NATH & ASSOCIATES
112 South West Street
Alexandria, VA 22314

EXAMINER

VORTMAN, ANATOLY

ART UNIT	PAPER NUMBER
----------	--------------

2835

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,891

Applicant(s)

WU ET AL.

Examiner

Anatoly Vortman

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-10,12-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7-10 and 12-15 is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 16 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/30/06 has been entered.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is **replete with terms which are not clear, concise and exact.** The amendment to the specification did not cure all of the deficiencies as was indicated in the final Office action and also had **introduced new** problems. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. **Examples** of some unclear, inexact or verbose terms used in the specification are: "Typically, on a given processor card are the processor semiconductor device" (p.3, lines 7 and 8); "a molding compound 108 is injected into the ball grid array package device 100 to perform the ball grid array package" (p. 4, lines 6 and 7); "at least two openings joined at least two thermal supports" (p. 11, lines 5 and 6). Also, the entire passages on p. 12 of the amendment, lines 5-8 and on p.

14, lines 5-10, are so cumbersome and idiomatically incorrect that it is hard to understand what the Applicant is trying to convey.

The Examiner would like to reiterate, that aforementioned are only the examples. The specification replete with grammatical and idiomatic errors. There are numerous similar problems throughout the original and amended specifications.

The Applicant is again advised to carefully review the entire specification and the abstract in order to correct the deficiencies as stated above.

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. Applicant must submit the substitute specification with the reply to the instant Office action. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

3. Claim 16 is objected because of the recitation: “a second heat dissipating structure located below said first heat dissipating structure”. It appears, that in order to comply with Fig. 8 of the instant application, the claim should recite: “a second heat dissipating structure located above (emphasis added) said first heat dissipating structure”. Appropriate correction is required.

Allowable Subject Matter

Art Unit: 2835

4. Claims 1, 3-5, 7-10, and 12-15, are allowed. Claims 16 and 18-20 would be allowed upon addressing objection to claim 16 as presented above.

The allowability of claims 1, 3-5, and 7-9, resides in the overall structure of the device as recited in independent claim 1, and at least in part, because claim 1 contains limitations of claim 6, previously indicated as having allowable subject matter (see paragraph 9 of the non-final Office action mailed on October 5, 2005).

The allowability of claims 10 and 12-15 resides in the overall structure of the device as recited in independent claim 10, and at least in part, because claim recites: “a thermal block embedded in said cavity...is attached to said backside of said first heat dissipating structure”.

Regarding claims 16 and 18-20, independent claim 16 contains allowable subject matter, at least in part, because of the recitation: “thermal block located on a backside of said first heat dissipating structure”.

Conclusion

5. This application is in condition for allowance except for the formal matters presented above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213. Therefore, no amendments to the claims affecting the scope of the claims are allowed. Only amendment to cure the deficiencies as presented above should be made.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AV

A handwritten signature in black ink, appearing to read 'A. Vortman', with a long horizontal flourish extending to the right.

Anatoly Vortman
Primary Examiner
Art Unit 2835